IMAGING PLATFORM FOR NANOPARTICLE DETECTION APPLIED TO SPR BIOMOLECULAR INTERACTION ANALYSIS

Abstract of the Disclosure

A flow imaging system is used to implement surface plasmon resonance (SPR) detection to study bio-molecular interactions. The flow imaging system is used to capture SPR absorption spectra of large numbers of objects, where each object includes both a metal film capable of exhibiting SPR, and detecting molecules. Analyte molecules are added to a solution of such objects, and the result is introduced into the flow imaging system which collects full SPR spectral data from individual objects. The objects can be nanoparticles or larger particles that support metal island films. The SPR spectral data can be used to determine specificity, kinetics, affinity, and concentration with respect to the interactions between the detecting molecules and the analyte molecules.